

III. Remarks

A. Status of the Application

Claims 35, 38, and 40-56 will be pending after entry of the present paper. Claims 35-38 and 40-54 were previously pending. Claims 36 and 37 are canceled by the present paper without prejudice to or disclaimer of the subject matter therein. New claims 55 and 56 are added by the present paper. Reconsideration of the application is respectfully requested in light of the above amendments and the following remarks.

B. Claim Rejections Under 35 U.S.C. § 112

Claims 35-38 and 40-54 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office Action asserts that the limitations of claims 35 and 45 reciting “formed of a relatively rigid biocompatible material such that at least the third and fourth surfaces of the center member are not deformed” are not supported by the specification. Applicants have amended claims 35 and 45 to recite “wherein the first member and the second member are formed of a relatively rigid biocompatible material and wherein the third and fourth surfaces of the center member are formed of an outer material that is harder than an inner material closer to a core of the center member such that at least the third and fourth surfaces of the center member are not deformed by the sliding articulating engagement between the center member and the first and second members,” which is clearly supported by the disclosure at paragraph [0037] of the published application.

Also, the Office Action asserts that the limitation of claim 50 reciting “wherein the substantially circular boundary of the convex projection of the second member has a first diameter and wherein the substantially circular boundary of the concave central portion of the center member has a second diameter, the second diameter being less than the first diameter” is not supported by the specification. However, as pointed out in MPEP §2163.02:

The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.

For example, the written description requirement is met where the claimed subject matter is disclosed in the drawings rather than in the written specification. In this regard, MPEP §2163(II)(A)(3)(a) explains that:

Possession [of the invention] may be shown in many ways. For example, possession may be shown by describing an actual reduction to practice of the claimed invention. Possession may also be shown by a clear depiction of the invention in detailed drawings . . . which permit a person skilled in the art to clearly recognize that applicant had possession of the claimed invention. . . .

An applicant may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole. See, e.g., *Vas-Cath*, 935 F.2d at 1565, 19 USPQ2d at 1118 (“drawings alone may provide a ‘written description’ of an invention as required by Sec. 112\”); *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962) (the drawings of applicant’s specification provided sufficient written descriptive support for the claim limitation at issue); . . .

Consequently, even though the detailed description specification of the present application does not contain the phrase “the second diameter being less than the first diameter,” it is respectfully submitted that the present application does in fact include a proper written description of this subject matter, because the drawings of the present application disclose at least one embodiment that supports this particular claim language. In that regard, Applicants would at least point to Figs. 2 and 5—where the concave recess of the center member is shown to have a circular boundary with a diameter that is less than the diameter of the circular boundary of the convex projection—as supporting the recited claim language. In accordance with MPEP § 2163, Fig. 5 clearly provides a sufficient written description to support the limitations of claim 50 reciting: “wherein the substantially circular boundary of the convex projection of the second member has a first diameter and wherein the substantially circular boundary of the concave central portion of the center member has a second diameter, the second diameter being less than the first diameter.” Accordingly, Applicants request that the §112 rejection of claims 50-54 be withdrawn.

C. Claim Rejections Under 35 U.S.C. § 102

Claims 35 and 40-49 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2006/0259144 to Trieu (“the Trieu application”). The PTO provides in MPEP § 2131 that

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v.*

Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... “The identical invention must be shown in as complete detail as is contained in the ... claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added)

Therefore, to sustain the rejection of claims 35 and 40-49 the Trieu application must disclose each and every element in as complete detail as recited in the claims.

With respect to claim 35, however, the Trieu application does not appear to disclose “a first member ... comprising a concave first surface ... having a substantially constant first radius of curvature; a second member ... comprising a convex second surface and a tapered surface extending outwardly from the convex second surface, the convex second surface having a substantially constant second radius of curvature ... smaller than the first radius of curvature; and a center member ... comprising: a convex third surface for articulating with the concave first surface of the first member, the third surface having a substantially constant third radius of curvature substantially similar to the first radius of curvature, a concave fourth surface for articulating with the convex second surface of the second member, the concave fourth surface having a substantially constant fourth radius of curvature substantially similar to the second radius of curvature, a convex fifth surface extending substantially around the concave fourth surface, the convex fifth surface having a substantially constant fifth radius of curvature substantially equal to the first radius of curvature, the convex fifth surface configured for articulating with the tapered surface of the second member, the convex fifth surface being spaced from the tapered surface in a neutral position and in contact with the tapered surface in an articulation position,” as recited. Accordingly, the Trieu application fails to disclose each and every element in as complete detail as recited in independent claim 35 and, therefore, dependent claims 36-38 and 40-44 as well. Therefore, Applicants request that the § 102 rejection of claims 35 and 40-44 be withdrawn.

With respect to claim 45, the Trieu application does not appear to disclose “a first member for fixedly engaging a first vertebral body ... a second member for fixedly engaging a second vertebral body ... and a center member positioned between the first member and the second member, the center member in sliding articulating engagement with the first and second members ... wherein the first and second members are translatable with respect to one another via the sliding articulating engagement with the center member and wherein the first and second

members are biased towards a central alignment where the first and second members are substantially aligned with one another; wherein the center member articulates with respect to the first and second members such that the convex outer portion of the center member is spaced from the second member in the central alignment and is in contact with a surface of the second member surrounding the convex projection in at least some articulation positions,” as recited. Accordingly, the Trieu application fails to disclose each and every element in as complete detail as recited in independent claim 45 and, therefore, dependent claims 46-54 as well. Therefore, Applicants request that the § 102 rejection of claims 45-49 be withdrawn.

Further, the Trieu application qualifies as prior art, if at all, only under 35 U.S.C. § 102(e) and was under a common obligation of assignment to SDGI Holdings, Inc. at the time of invention. In that regard, the assignment of the Trieu application to SDGI Holdings, Inc. is recorded at Reel/Frame: 014931/0342 and the assignment of the present application is recorded at Reel/Frame: 015593/0520. Thus, in accordance with 35 U.S.C. § 103(c), the Trieu application also cannot preclude patentability of claims 35-38 and 40-54 under §103.

D. Claim Rejections Under 35 U.S.C. §103

1. Trieu Application

Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Trieu Application. However, as discussed above, the Trieu application qualifies as prior art, if at all, only under 35 U.S.C. § 102(e) and was under a common obligation of assignment to SDGI Holdings, Inc. at the time of invention. Thus, in accordance with 35 U.S.C. § 103(c), the Trieu application cannot preclude patentability of claim 36. Accordingly, Applicants request that the §103 rejection of claim 36 be withdrawn.

2. Ferree Patent

Claims 35-38, 40-43, and 45-48 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,066,958 to Ferree (“the Ferree patent”). Applicants respectfully traverse the rejection of these claims on the grounds that the Ferree patent is defective in establishing a *prima facie* case of obviousness.

As the PTO recognizes in MPEP § 2142:

... The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation

to submit evidence of nonobviousness...

In the present application, a *prima facie* case of obviousness does not exist with respect to claims 35-38, 40-43, and 45-48 for at least the reasons set forth below.

With respect to amended independent claim 35 the Ferree patent fails to disclose, “a first member ... comprising a concave first surface ... having a substantially constant first radius of curvature; a second member ... comprising a convex second surface and a tapered surface extending outwardly from the convex second surface, the convex second surface having a substantially constant second radius of curvature ... smaller than the first radius of curvature; and a center member ... comprising: a convex third surface for articulating with the concave first surface of the first member, the third surface having a substantially constant third radius of curvature substantially similar to the first radius of curvature, a concave fourth surface for articulating with the convex second surface of the second member, the concave fourth surface having a substantially constant fourth radius of curvature substantially similar to the second radius of curvature, a convex fifth surface extending substantially around the concave fourth surface, the convex fifth surface having a substantially constant fifth radius of curvature substantially equal to the first radius of curvature, the convex fifth surface configured for articulating with the tapered surface of the second member, the convex fifth surface being spaced from the tapered surface in a neutral position and in contact with the tapered surface in an articulation position,” as recited. In that regard, the Ferree patent does not disclose or suggest a device having this combination of structural limitations. For example, the devices of the Ferree patent do not include a center member having a convex surface extending around a concave surface such that the convex surface is spaced from a tapered surface of the second member in a neutral position and in contact with the tapered surface in an articulation position.

Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 35. Claims 36-38 and 40-43 depend from and further limit claim 35.

Accordingly, claims 35-38 and 40-43 are patentable over the Ferree patent and Applicants request that the §103 rejection of claims 35-38 and 40-43 over the Ferree patent be withdrawn.

With respect to independent claim 45, the Ferree patent fails to disclose or suggest “a first member for fixedly engaging a first vertebral body ... a second member for fixedly engaging a second vertebral body ... and a center member positioned between the first member and the second member, the center member in sliding articulating engagement with the first and second

members ... wherein the first and second members are translatable with respect to one another via the sliding articulating engagement with the center member and wherein the first and second members are biased towards a central alignment where the first and second members are substantially aligned with one another; wherein the center member articulates with respect to the first and second members such that the convex outer portion of the center member is spaced from the second member in the central alignment and is in contact with a surface of the second member surrounding the convex projection in at least some articulation positions," as recited. In that regard, the Ferree patent does not disclose or suggest a device having this combination of structural limitations. For example, the devices of the Ferree patent do not include a center member having a convex outer portion that is spaced from the second member in central alignment and is in contact with a surface of the second member surrounding the convex projection of the second member in at least some articulation positions.

Thus, for at least these reasons a *prima facie* case of obviousness has not been established with respect to independent claim 45. Claims 46-48 depend from and further limit claim 45. Accordingly, claims 45-48 are patentable over the Ferree patent and Applicants request that the §103 rejection of claims 45-48 over the Ferree patent be withdrawn.

E. New Claims

New claims 55 and 56 are added by the present paper and recite combinations of limitations not disclosed or suggested by the cited references. Accordingly, Applicants submit that new claims 55 and 56 are patentable.

IV. Conclusion

It is believed that all matters set forth in the Office Action have been addressed and that all of the pending claims are in condition for allowance. Accordingly, an indication of allowability is respectfully requested.

The Office Action contains characterizations of the claims and the related art to which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in this or any other Office Action.

Should the Examiner deem that an interview with Applicants' undersigned attorney would further prosecution, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



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